

ABSTRACT OF THE DISCLOSURE

An apparatus for multiplexing a line and a data transmission method therefor are provided to improve data transmission efficiency. The apparatus for multiplexing a line according to the present invention includes: a plurality of conversion processors for modulating a call processing request signal or transmission data from each user application by a predetermined mode and then demodulating the signal or data to an original data. The apparatus can also process an external incoming call processing request signal or transmission data by a predetermined modulation/demodulation mode and provide the incoming signal to a corresponding user application. The apparatus includes a main controller for processing the call processing request signals provided from the conversion processors, and generating call control data that is added to the at least one header. The main controller is also configured to separate header data included in incoming transmission data. A multiplexing/demultiplexing processor is used for logically multiplexing the call processing request signals or transmission data output from the main controller and for demultiplexing an external multiplexing signal.